

G Street Bridge (HST)

STRUCTURE CONCRETE

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)
	LENGTH	WIDTH	THICK		AREA	
ENGLISH:1 METRIC:2 = 1						
SUPERSTRUCTURE CONCRETE						
TOP SLAB						
SLAB	92.99	70.00	2.00	1.00	140.0000	482.17
VOIDS	92.99			-33.00	0.7854	-89.26
without diaph, cap, hinge sections					TOP SLAB TOTAL	392.9
OVERHANG						
					OVERHANG TOTAL	
BOTTOM SLAB						
without diaph, cap, hinge sections					BOTTOM SLAB TOTAL	
BOTTOM SLAB FLARES						
without diaph, cap, hinge sections					BOTTOM SLAB FLARE TOTAL	
GIRDERS-INTERIOR						
without diaph, cap, hinge sections					INTERIOR GIRDERS TOTAL	
GIRDERS-EXTERIOR						
without diaph, cap, hinge sections					EXTERIOR GIRDERS TOTAL	
GIRDER FLARES						
					GIRDER FLARES TOTAL	
FILLETS						
					FILLETS TOTAL	
CLOSURE POUR						
					CLOSURE POUR TOTAL	
END (&intermediate) DIAPHRAGMS						
AT ABUTMENTS 1 & 3	70.04	2.50	3.50	2.00	8.7500	45.40
					END DIAPH TOTAL	45.4
BENTCAPS						
BENT CAP (basic)	70.07	4.00	4.50		18.0000	
BENT CAP (with aesthetics)	70.07	3.68	5.11	1.00	18.8064	48.81

G Street Bridge (HST)		STRUCTURE CONCRETE				5/29/2012	
ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)	
	LENGTH	WIDTH	THICK		AREA		
						BENTCAPS TOTAL	48.8
HINGES							
TOTAL SUPER CONCRETE						CY	487.1

G Street Bridge (HST)
STRUCTURE CONCRETE

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)	
	LENGTH	WIDTH	THICK		AREA		
SUBSTRUCTURE CONCRETE							
ABUTMENTS							
ABUT 1							
backwall	70.07	3.50	1.00	1	3.50	9.08	
stem	70.07	14.27	3.50	1	49.96	129.64	
shear keys	1.50	1.50	2.50	2	3.75	0.42	
ABUT 3							
backwall	70.01	3.50	1.00	1	3.50	9.08	
stem	70.01	13.95	3.50	1	48.84	126.63	
shear keys	1.50	1.50	2.50	2	3.75	0.42	
Note: Lengths measured along skew					ABUTMENT TOTAL		275.3
WINGWALLS							
Return Walls	7.00	17.61	1.13	4	19.81	20.55	
					WINGWALL TOTAL		20.5
COLUMNS-PIERS							
COLUMNS (basic)	19.25	2.50	2.50		6.2500		
COLUMNS (with aesthetics)	19.25	3.50	3.00	4.00	10.5000	29.94	
					COLUMNS TOTAL		29.9
NON FTG TOTAL CONCRETE						CY	325.8
FOOTINGS							
ABUT 1	70.07	13.50	1.67	1.00	22.50	58.40	
ABUT 3	70.01	13.50	1.67	1.00	22.50	58.34	
FOOTING KEY	70.04	2.00	1.00	2.00	2.00	10.38	
BENT 2	14.00	14.00	3.00	4.00	42.00	87.11	
FOOTING TOTAL CONCRETE						CY	214.2
RETAINING WALLS							
AT ABUTMENT 1							
Retaining Wall Type 1 (H=10') - Left	57.68	8.42	1.08	1	9.12	19.49	
battered side	57.68	8.42	0.35	0.5	2.96	3.16	
Retaining Wall Type 1 (H=8') - Right	54.52	7.30	1.08	1	7.91	15.97	
battered side	54.52	7.30	0.30	0.5	2.22	2.24	
AT ABUTMENT 3							
Retaining Wall Type 1 (H=8') - Left	64.20	7.86	1.08	1	8.51	20.24	
battered side	64.20	7.86	0.33	0.5	2.58	3.06	
Retaining Wall Type 1 (H=8') - Right	50.00	7.17	1.08	1	7.77	14.39	
battered side	50.00	7.17	0.29	0.5	2.08	1.93	
Retaining Wall Type 1 (H=6') - Right	41.23	5.22	1.08	1	5.65	8.64	
battered side	41.23	5.22	0.22	0.5	1.14	0.87	
FOOTINGS							
Abut1 Retaining Wall Type 1 (H=10') - Left	57.68	7.58	1.33	1.00	10.11	21.59	
Key	57.68	1.33	0.67	1.00	0.89	1.90	
Abut1 Retaining Wall Type 1 (H=8') - Right	54.52	7.25	1.33	1.00	9.66	19.51	
Key	54.52	1.33	0.67	1.00	0.89	1.79	
Abut3 Retaining Wall Type 1 (H=8') - Left	64.20	7.25	1.33	1.00	9.66	22.98	
Key	64.20	1.33	0.67	1.00	0.89	2.11	
Abut3 Retaining Wall Type 1 (H=8') - Right	50.00	7.25	1.33	1.00	9.66	17.90	
Key	50.00	1.33	0.67	1.00	0.89	1.65	

G Street Bridge (HST)	STRUCTURE CONCRETE	5/29/2012
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STRUCTURE CONCRETE

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)
	LENGTH	WIDTH	THICK		AREA	
Abut3 Retaining Wall Type 1 (H=6') - Right	41.23	7.00	1.33	1.00	9.33	14.25
Key	41.23	1.33	0.67	1.00	0.89	1.36
					RET WALL TOTAL	195.0
APPROACH SLAB						
					APP SLAB TOTAL	
SLOPE PAVING						
					SLOPE PAVING TOTAL	
SEAL COURSE CONCRETE						
					SEAL COURSE TOTAL	
MINOR CONCRETE						
					MINOR CONC. TOTAL	

G Street Bridge (HST)

REINFORCING STEEL

5/29/2012

ID #	BAR SIZE & DESCRIPTION	HOOK in	MAIN ft	HOOK in	QTY (ea)	SIZE #	LENG ft	TOTAL feet	WEIGHT PER REBAR SIZE									
									#3	#4	#5	#6	#7	#8	#9	#10	#11	#14
ENGLISH:1 METRIC:2 = 1																		
SUPERSTRUCTURE																		
DECK SLAB																		
1	#6 cont		102.77		33	6	102.8	3391										
2	#6 cont, tot 2 per stirrup		102.77		64	6	102.8	6577				5093.6						
3	#6 cont, tot 2 per stirrup		102.77		64	6	102.8	6577				9878.6						
4	#10 cont, tot 4 typ		102.77		8	10	102.8	822								3537.6		
5	#4 cont typ		102.77		2	4	102.8	206		137.3								
6	#10 cont, tot 2 typ		102.77		4	10	102.8	411								1768.8		
7	#6 cont, per stirrup		102.77		32	6	102.8	3288				4939.3						
8	#6 cont, tot 3 under each void		102.77		99	6	102.8	10174				15280.9						
9	#5 @ 12		69.67		93	5	69.7	6479				6757.6						
10	#3 @ 3'-0"		69.67		32	3	69.7	2229	838.2									
11	#5 @ 12		69.67		84	5	69.7	5852				6103.6						
12	#5 @ 12	24	0.66667	24	190	5	4.7	887				924.8						
13	#5 @ 12		1.66667	24	190	5	3.7	697				726.6						
14	#4 @ 12	5	1.309	5	190	4	2.1	407		271.9								
15	#4 stirrups	4.5	3.78	4.5	3040	4	4.5	13771		9199.2								
16	#4 x 1'-6" @ 18 (extend to return walls)		1.5		158		1.5	237										
17	#4 @ 18	4.5	1		140		1.4	193										
18	#8 @ 12		25		71	8	25.0	1775					4739.3					
19	#8 tot 36		20		72	8	20.0	1440					3844.8					
BENT CAP																		
20	#10 tot 24		68.07		24	10	68.1	1634									7029.7	
21	#10 tot 16		67.4033		16	10	67.4	1078									4640.6	
22	#10 tot 5		69.07		5	10	69.1	345									1486.0	
23	#5 tot 2		69.7367		2	5	69.7	139				145.5						
24	#5 stirrups (one stirrup unit)	5.5	9.54445	5.5	128	5	10.5	1339				1396.6						
	(one horizontal bar unit)	5.5	4.77667	6	128	5	5.7	734				765.6						
24A	#4 Tot 5	9	9.00667	9	20	4	10.5	210		140.4								
24B	#4 @ 12	8	4.16667	8	64	4	5.5	352		235.1								
24C	#4 @ 12	12	1.1256	12	128	4	3.1	398		266.1								
24D	#4 Tot 6		66.8983		6	4	66.9	401		288.1								
END DIAPHRAGM (BOTH ENDS)																		
25	#7 tot 5		69.7067		10	7	69.7	697					1424.8					
26	#7 tot 5		66.7067		10	7	66.7	667					1363.5					
27	#4 tot 4		68.2067		8	4	68.2	546		364.5								
28	#6 @ 12	24	5		142	6	7.0	994				1493.0						
29	#5 @ 12	26	6.16667	26	142	5	10.5	1491			1555.1							

REINFORCING STEEL

5/29/2012

[illegible]

REINFORCING STEEL

5/29/2012

[illegible]

G Street Bridge (HST)

REINFORCING STEEL

5/29/2012

ID #	BAR SIZE & DESCRIPTION	HOOK in	MAIN ft	HOOK in	QTY (ea)	SIZE #	LENG ft	TOTAL feet	WEIGHT PER REBAR SIZE									
									#3	#4	#5	#6	#7	#8	#9	#10	#11	#14
RETAINING WALL																		
AT ABUTMENT 1																		
LEFT SIDE (H = 10') - H=8.42' - L=57.68'																		
63	#4 #4 @ 18-t bars		57.2633		7	4	57.3	401										
64	#5 #5 @ 18-s bars		57.2633		6	5	57.3	344		267.8								
65	#5 #5 @ 12		62.2633		6	5	62.3	374				358.4						
66	#5 #5 tot 4		62.2633		4	5	62.3	249				389.6						
67	#6 #6 @ 10 x 15'-e bars (note 5)		9.34563	64.852	20	6	15.0	300					450.6					
68	#6 #6 @ 9-c bars (top, to toe+splice)		9.512	40.208	77	6	12.9	990					1487.6					
69	#5 #5 @ 12		9.33663		58	5	9.3	542				564.8						
70	#6 #6 @ 9-d bars		5.7535		77	6	5.8	443					665.4					
71	#5 #5 @ 9		5.066		77	5	5.1	390				406.9						
72	#5 #5 @ 9		3.0833		77	5	3.1	237				247.6						
73	#5 #5 @ 12		62.2633		10	5	62.3	623				649.4						
RIGHT SIDE (H = 8') - H=7.30' - L=54.52'																		
63	#4 #4 @ 18-t bars		54.1043		7	4	54.1	379		253.0								
64	#5 #5 @ 18-s bars		54.1043		6	5	54.1	325				338.6						
65	#5 #5 @ 12		59.1043		6	5	59.1	355				369.9						
66	#5 #5 tot 4		59.1043		4	5	59.1	236				246.6						
67	#6 #6 @ 10 x 15'-e bars (note 5)		8.22163	78.34	20	6	15.0	300					450.6					
68	#6 #6 @ 9-c bars (top, to toe+splice)		8.383	38.644	73	6	11.6	847					1272.3					
69	#5 #5 @ 12		8.21663		55	5	8.2	452				471.3						
70	#6 #6 @ 9-d bars		5.5505		73	6	5.6	405					608.6					
71	#5 #5 @ 9		4.863		73	5	4.9	355				370.3						
72	#5 #5 @ 9		3		73	5	3.0	219				228.4						
73	#5 #5 @ 12		59.1043		8	5	59.1	473				493.2						
AT ABUTMENT 3																		
LEFT SIDE (H = 8') - H=7.86' - L=64.20'																		
63	#4 #4 @ 18-t bars		63.7833		7	4	63.8	446		298.3								
64	#5 #5 @ 18-s bars		63.7833		6	5	63.8	383				399.2						
65	#5 #5 @ 12		68.7833		6	5	68.8	413				430.4						
66	#5 #5 tot 4		68.7833		4	5	68.8	275				287.0						
67	#6 #6 @ 10 x 15'-e bars (note 5)		8.78063	71.632	10	6	15.0	150					225.3					
68	#6 #6 @ 9-c bars (top, to toe+splice)		8.943	38.932	86	6	12.2	1048					1574.3					
69	#5 #5 @ 12		8.77663		65	5	8.8	570				595.0						
70	#6 #6 @ 9-d bars		5.5265		86	6	5.5	475					713.9					
71	#5 #5 @ 9		4.839		86	5	4.8	416				434.0						
72	#5 #5 @ 9		3		86	5	3.0	258				269.1						
73	#5 #5 @ 12		68.7833		8	5	68.8	550				573.9						

G Street Bridge (HST)

REINFORCING STEEL

5/29/2012

ID #	BAR SIZE & DESCRIPTION	HOOK in	MAIN ft	HOOK in	QTY (ea)	SIZE #	LENG ft	TOTAL feet	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18
RIGHT SIDE (H = 8') - H=7.17' - L=50.0'																			
63	#4 @ 18-t bars		49.6667		7	4	49.7	348		232.2									
64	#5 @ 18-s bars		49.6667		6	5	49.7	298			310.8								
65	#5 @ 12		49.6667		6	5	49.7	298			310.8								
66	#5 tot 4		49.6667		4	5	49.7	199			207.2								
67	#6 @ 10 x 15'-e bars (note 5)		8.09563	79.852	11	6	15.0	165				247.8							
68	#6 @ 9-c bars (top, to toe-splice)		8.253	38.584	67	6	11.5	768				1154.1							
69	#5 @ 12		8.06663		51	5	8.1	412			430.2								
70	#6 @ 9-d bars		5.5555		67	6	5.6	372				559.1							
71	#5 @ 9		4.868		67	5	4.9	326			340.2								
72	#5 @ 9		3		67	5	3.0	201			209.6								
73	#5 @ 12		49.6667		8	5	49.7	397			414.4								
RIGHT SIDE (H = 6') - H=5.22' - L=41.23'																			
63	#4 @ 18-t bars		40.8133		6	4	40.8	245		163.6									
64	#5 @ 18-s bars		40.8133		4	5	40.8	163			170.3								
65	#5 @ 12		45.8133		6	5	45.8	275			286.7								
66	#5 tot 4		45.8133		4	5	45.8	183			191.1								
67	#6 @ 10 x 15'-e bars (note 5)		6.14163	103.3	11	6	15.0	165				247.8							
68	#6 @ 9-c bars (top, to toe-splice)		6.303	37.612	55	6	9.4	519				779.6							
69	#5 @ 12		6.13663		42	5	6.1	258			268.8								
70	#5 @ 9-d bars		5.0225		55	5	5.0	276			288.1								
71	#5 @ 9		4.699		55	5	4.7	258			269.6								
72	#5 @ 9		3		55	5	3.0	165			172.1								
73	#5 @ 12		45.8133		8	5	45.8	367			382.3								
RETAINING WALL TOTAL (LB) =										1214.8	12635.5	10437.0							
TOTAL WEIGHT (LB) =										186937	36398	59627	7029	17838	12494	25434	326		

SUMMARY

SIZE	LB/FT	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18
186937	0.376	838	26952	36398	59627	7029	17838	12494	25434	326		

NOTES:

ALWAYS TYPE 0 (ZERO) FOR NO INPUT. (TO AVOID ERROR MESSAGE)

TOTALS ARE AUTOMATICALLY TRANSFERRED TO THE SUMMARY SHEET.

SIMILAR TO FORM DS-D-0110 (REV. 5/93)

G Street Bridge (HST) STRUCTURE EXCAVATION 5/29/2012

G Street Bridge (HST) STRUCTURE EXCAVATION 5/29/2012

G Street Bridge (HST) STRUCTURE EXCAVATION 5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)
	LENGTH	WIDTH	THICK		AREA	
ENGLISH:1 METRIC:2 = 1 For piles battered 1:3, use BATTER FACTOR = 1.054						
ABUTMENT						
TYPE =	BRIDGE					
BENTS						
TYPE =	BRIDGE					261.4
COLUMN 1		16.00	16.00	6.855	1.00	109.68
COLUMN 2		16.00	16.00	6.887	1.00	110.19
COLUMN 3		16.00	16.00	6.913	1.00	110.61
COLUMN 4		16.00	16.00	6.913	1.00	110.61
RETAINING WALL						
TYPE =	BRIDGE					285.7
ABUTMENT 1 LEFT						
WW (H=10')		57.68	9.58	2.837	1.00	27.19
ABUTMENT 1 RIGHT						
WW (H=8')		54.52	9.25	3.376	1.00	31.23
ABUTMENT 3 LEFT						
WW (H=8')		64.20	9.25	2.753	1.00	25.47
ABUTMENT 3 RIGHT						
WW (H=8')		50.00	9.25	3.294	1.00	30.47
WW (H=6')		41.23	9.00	3.466	1.00	31.20
TOTAL =						547.1

G Street Bridge (HST)

STRUCTURE BACKFILL

5/29/2012

ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)
	LENGTH	WIDTH	THICK		AREA	
ENGLISH:1 METRIC:2 = 1						
ABUTMENT						
					ABUTMENT TOTAL	
BENTS						
COLUMN 1						
Excavation						65.00
Footing	14.00	14.00	3.00	-1.00	42.00	-21.78
Column Portion (basic)	2.50	2.50	3.86		9.64	
Column Portion (with aesthetics)	3.50	3.00	3.86	-1.00	11.57	-1.50
Road	16.00	16.00	1.50	-1.00	24.00	-14.22
COLUMN 2						
Excavation						65.30
Footing	14.00	14.00	3.00	-1.00	42.00	-21.78
Column Portion (basic)	2.50	2.50	3.89		9.72	
Column Portion (with aesthetics)	3.50	3.00	3.89	-1.00	11.66	-1.51
Road	16.00	16.00	1.50	-1.00	24.00	-14.22
COLUMN 3						
Excavation						65.55
Footing	14.00	14.00	3.00	-1.00	42.00	-21.78
Column Portion (basic)	2.50	2.50	3.91		9.78	
Column Portion (with aesthetics)	3.50	3.00	3.91	-1.00	11.74	-1.52
Road	16.00	16.00	1.50	-1.00	24.00	-14.22
COLUMN 4						
Excavation						65.55
Footing	14.00	14.00	3.00	-1.00	42.00	-21.78
Column Portion (basic)	2.50	2.50	3.91		9.78	
Column Portion (with aesthetics)	3.50	3.00	3.91	-1.00	11.74	-1.52
Road	16.00	16.00	1.50	-1.00	24.00	-14.22
					BENTS TOTAL	111.3
RETAINING WALL						
ABUTMENT 1 LEFT						
WW (H=10')						
Excavation						58.08
Footing	57.68	7.58	1.33	-1.00	10.11	-21.60
Wall	57.68	1.37	1.50	-1.00	2.06	-4.41
Wall (Battered Side)	57.68	0.06	1.50	-0.50	0.09	-0.10
Roadside Backfill	57.68	5.42	4.99	1.00	27.04	57.77
New FG (non sloped)	52.68	3.33	1.69	1.00	5.62	10.96
New FG (sloped rear) 1	5.00	3.33	4.90	1.00	16.33	3.02
New FG (sloped rear) 2	6.47	3.33	4.31	0.50	14.37	1.72
105.5						
ABUTMENT 1 RIGHT						
WW (H=8')						
Excavation						63.06
Footing	54.52	7.25	1.33	-1.00	9.67	-19.52
Wall	54.52	1.30	2.04	-1.00	2.66	-5.37
Wall (Battered Side)	54.52	0.09	2.04	-0.50	0.17	-0.18
Roadside Backfill	54.52	3.76	4.78	1.00	17.94	36.23

G Street Bridge (HST)

STRUCTURE BACKFILL

5/29/2012

[illegible]

G Street Bridge (HST)

PERVIOUS BACKFILL

5/29/2012

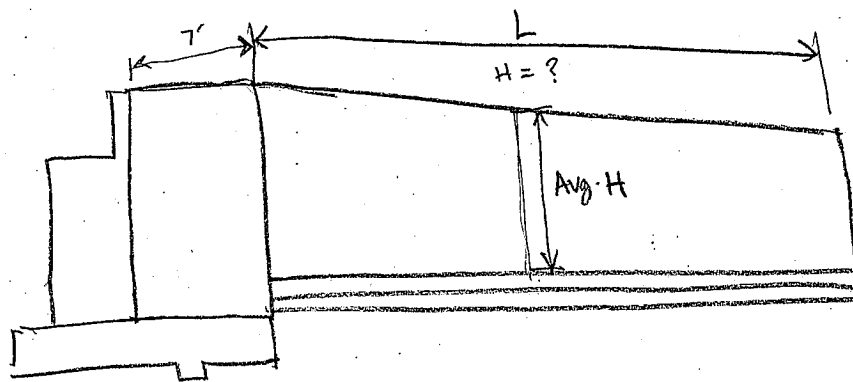
ITEM DESCRIPTION	DIMENSIONS (FT)			EA	(SF)	TOTAL (CY)
	LENGTH	WIDTH	THICK		AREA	
ENGLISH:1 METRIC:2 = 1						
ABUTMENT						
Wall Drains are assumed to be 3" above FG					ABUTMENT TOTAL	0.0
BENTS						
					BENTS TOTAL	0.0
RETAINING WALL						
At Abutment 1 Left Side						
Return Wall	7.00	6.85	1.00	1.00	6.85	1.78
WW Design H = 10'	57.68	1.83	1.00	1.00	1.83	3.91
At Abutment 1 Right Side						
Return Wall	7.00	3.54	1.00	1.00	3.54	0.92
WW Design H = 8'	54.52	0.72	1.00	1.00	0.72	1.44
At Abutment 3 Left Side						
Return Wall	7.00	1.48	1.00	1.00	1.48	0.38
WW Design H = 8'	64.20	1.67	1.00	1.00	1.67	3.98
At Abutment 3 Right Side						
Return Wall	7.00	1.36	1.00	1.00	1.36	0.35
WW Design H = 8'	50.00	1.96	1.00	1.00	1.96	3.63
WW Design H = 6'	32.37	1.10	1.00	0.00	1.10	
Wall Drains are assumed to be 3" above FG					RETAINING WALL TOTAL	16.4
TOTAL =						16.4

G Street Bridge (HST)
ARCHITECTURAL TREATMENT

5/29/2012

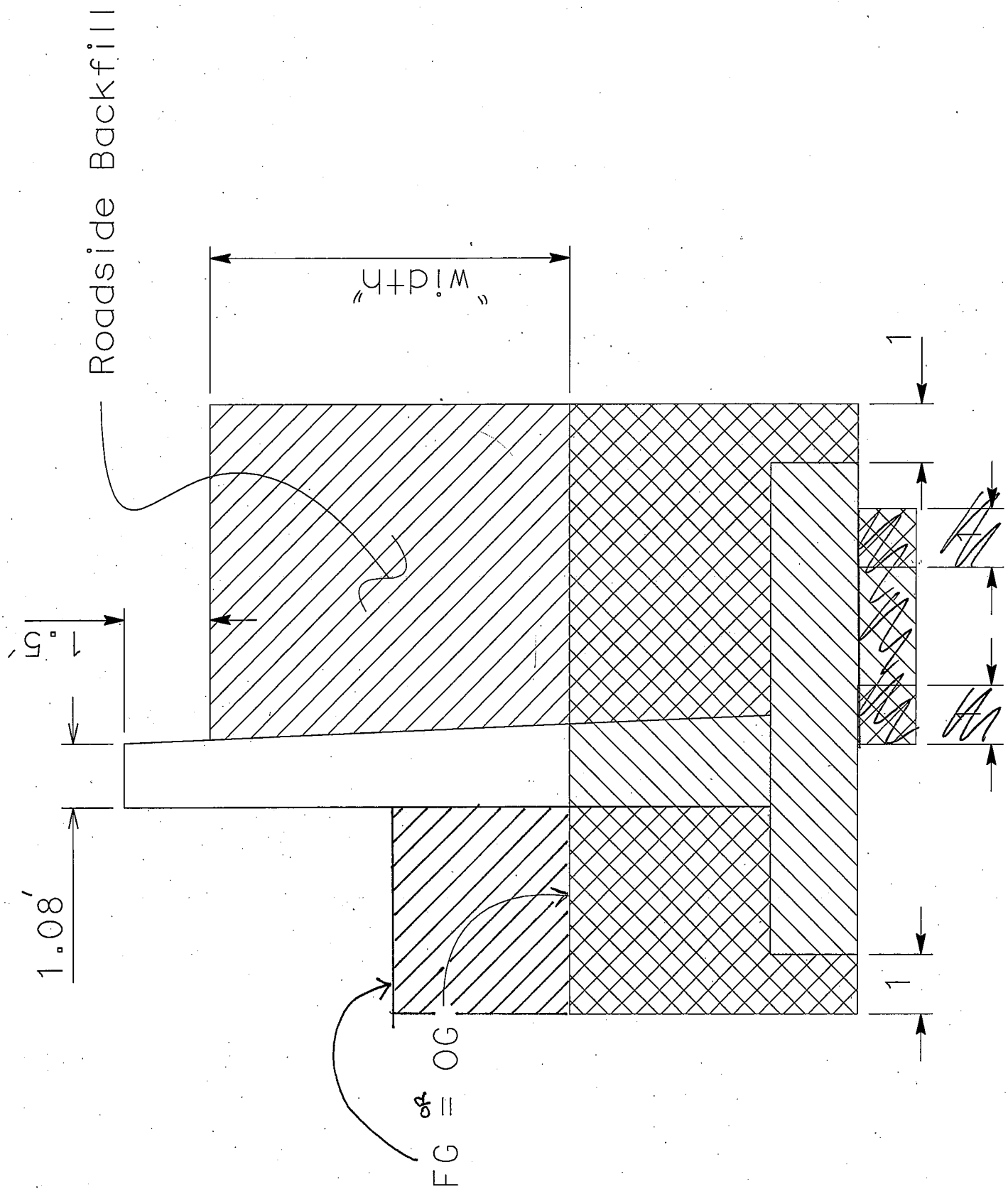
ITEM DESCRIPTION	DIMENSIONS (FT)						TOTAL (SF)
		LENGTH	AVG HEIGHT				
ENGLISH:1 METRIC:2 = 1							
RETAINING WALLS							
ABUT 1 LEFT							
DESIGN H = 10		57.68	6.22			358.87	
						AREA TOTAL	358.9
ABUT 1 RIGHT							
DESIGN H = 8		54.52	6.26			341.08	
						AREA TOTAL	341.1
ABUT 3 LEFT							
DESIGN H = 8		64.20	5.98			384.06	
						AREA TOTAL	384.1
ABUT 3 RIGHT							
DESIGN H = 8		50.00	6.27			313.65	
DESIGN H = 6		41.23	4.27			176.05	
						AREA TOTAL	489.7
SUB TOTAL AREA						SF	1,573.7
ABUTMENT FACE							
ABUT 1							
FACE AREA		70.07	11.00			770.77	
RETURN WALL		7.00	11.00			77.00	
RETURN WALL		7.00	11.00			77.00	
						AREA TOTAL	924.8
ABUT 3							
FACE AREA		70.01	11.00			770.11	
RETURN WALL		7.00	11.00			77.00	
RETURN WALL		7.00	11.00			77.00	
						AREA TOTAL	924.1
SUB TOTAL AREA						SF	1,848.9
TOTAL ARCH TREAT AREA						SF	3,422.6

New Abut RW Dimensions :



	L	Avg. H		
Abut 1 Left (RW Layout 1)	57.677'	8.422'	(H=10) ✓	
Abut 1 Right (RW Layout 2)	54.521'	7.299'	(H=8) ✓	
Abut 3 Left (RW Layout 3)	64.198'	7.857'	(H=8) ✓	
Abut 3 Right (RW Layout 4)	50'	7.173'	(H=8) ✓	
	41.229'	6.967'	(H=6) ✓	
		5.220'		

$\frac{1.083'}{x}$
 $x = 1.434', l = 8.429'$
 $x = 1.387', l = 7.305'$
 $x = 1.411', l = 7.864'$
 $x = 1.373', l = 7.179'$
 $x = 1.301', l = 5.225'$

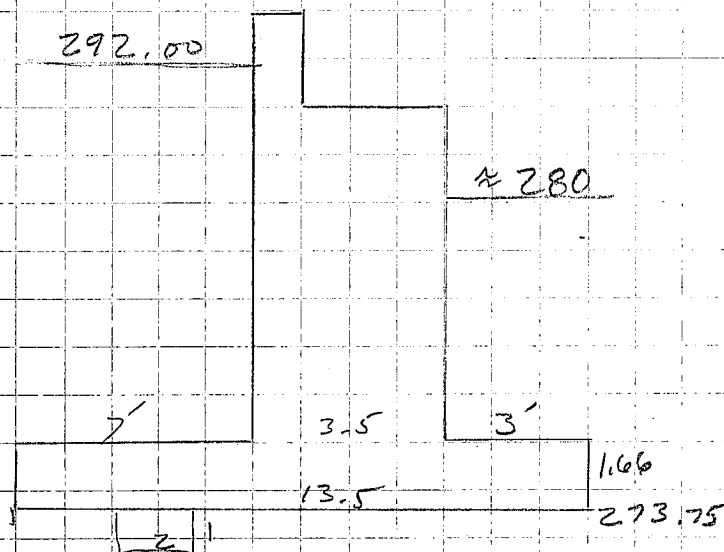


DATE 5/2012

SUBJECT Excavation & Backfill

DS-D 18 (REV. 3-83)

Abut #1 RW#1 STA 12+63.83 - 13+33 L=69.17' = Abut #1 Length.
 $H = 293.14 - (273.75 + 1.67) = 17.72$



$$\text{Excavation} = (15.5)(18.39)(69.17) = 19716.56 \text{ ft}^3 = 730.24 \text{ cu yd.} \rightarrow 735.36 \text{ cu yd.}$$

$$(2)(1)(69.17) = 138.34 \text{ ft}^3 = 5.12 \text{ cu yd.}$$

$$\text{Backfill} = (2)(1)(1.66)(69.17) = 229.64$$

$$= 8(16.59)(69.17) = 9180.24$$

$$= 4(4.59)(69.17) = 1259.96$$

$$\frac{10742.84 \text{ ft}^3}{27} = 397.88 \text{ cu yd.}$$

DATE

5/20/12

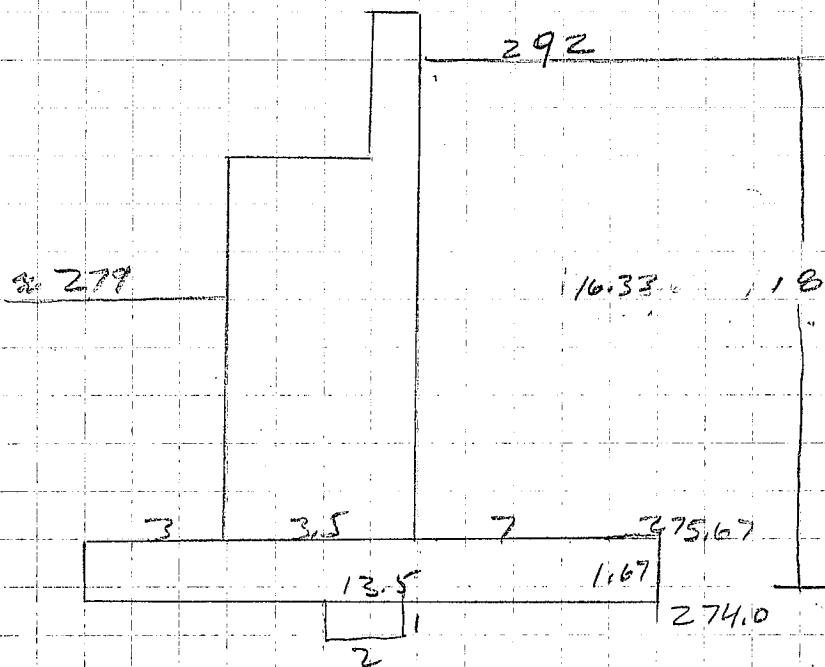
SUBJECT

Excavation & Backfill

DS D 19 (REV. 3/03)

DATE CALCULATED

Abut #3 RW #2 STA 12+46 - 13+37.23 L = 71.23
 $H_{top} = 292 - 274 = 18$



Excavation: $(15.5)(18)(71.23) = 19873.17 = 736.04 \text{ cu yd} > 741.31 \text{ cu yd.}$
 $(2)(1)(71.23) = 142.46 = 5.27 \text{ cu yd}$

Backfill

$(2)(1)(1.67)(71.23) = 237.90$
 $(3)(3.33)(71.23) = 711.58$
 $(8)(16.33)(71.23) = 9305.48$
 $10254.96 = 379.81 \text{ cu yd.}$

About 1 Retaining Wall Architectural treatment,
Prepar STAIN
 $253.23 + 250.16 = 503.39 \text{ ft}^2$

About 3

$$324.70 + 251.19 = 575.89 \text{ ft}^2$$

$$\underline{\Sigma 1079.28 \text{ ft}^2}$$

GRG

06-24T201

DATE 5/20/12 PROJECT G STREET OC

US-D-10-REV. 1-02

BENT2 Architectural Treatment Prepare Stain

$$\begin{aligned} & [2.5'(2)(4.42') + 2'(4)(4.42')] 4 \text{ col} = \\ & [21.1 + 35.36] 4 = 229.84 \text{ L42} \end{aligned}$$